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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,376	10/30/2003	Christopher E. Schafer	993819-8	7890

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EXAMINER

PRICE, CRAIG JAMES

ART UNIT PAPER NUMBER

3753

DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/697,376

Applicant(s)

SCHAFER ET AL.

Examiner

Craig Price

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/30/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Declaration**

1. The declaration under 37 CFR 1.132 filed 26 May 2006 is insufficient to overcome the obviousness rejection based upon the statutory grounds below indicating that the rejections have not been overcome as set forth in the last Office action because:

Regarding the "tendency to stick", this is a statement, which amounts to an affirmation of how the claimed subject matter was intended to function. This is not relevant to the issue of nonobviousness of the claimed subject matter and provides no objective evidence thereof. See MPEP § 716.

Regarding the angle selection, declarant provides no objective evidence in support of alleged desirability of the recited angle range.

Therefore, having considered the factual inquiries specified in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), and the factual allegations in the applicant's declaration in accordance with the provision of 37 CFR 1.132, the rejections are deemed proper for the reasons set forth below.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3,7-10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Woodward (US 4,070,237).

Regarding claims 1 and 10, Woodward discloses an apparatus, shown in figure 3A, for retaining fluid (the fluid in this case is air, and also in some cases “a clean spray of water” Col. 5, Lns 28-33) in a liquid delivery tube comprising of, a lower portion (15) having a ball valve (18) that permits only unidirectional flow of fluids and includes a valve chamber (surrounding 18) for housing a ball and having an inlet end (17) and an outlet end (21) being spaced apart sufficiently so that the ball is longitudinally, reciprocally movable within the chamber from a closed position at the inlet end of the chamber to an open position at the outlet end of the chamber, and an upper tubular portion (13) that has an outside diameter that is tapered to its terminus to facilitate insertion into a liquid delivery tube (external chamfer close to reference number 13, is tapered in a manner which can facilitate insertion), the tubular portion having an elongated, tapered passageway (22) that communicates with the outlet end of the valve chamber to convey fluid from the chamber to the tube and the valve chamber inlet end includes a valve seat having sidewalls that taper inwardly from the valve chamber such that the diameter of the valve seat is reduced toward the valve chamber inlet end to prevent the ball from becoming stuck therein (Col. 4, Lns. 14-17 and Col. 5, Lns. 3-10, the experiment performed indicates that valve was found to bleed a consistent amount of air, which indicates that no sticking occurred during the experiment).

Regarding claim 2, Woodward shows in Figure 3A, at least one interior rib (24) extends inward from an inside upper portion of the outlet of the valve chamber so that the ball cannot significantly obstruct the flow of fluids through the outlet of the valve chamber (Col. 4, Lns. 37-41).

Regarding claim 3, Woodward shows in Figure 3A, the inside upper portion of the valve chamber includes a plurality of the interior ribs (11) that are circumferentially spaced apart.

Regarding claim 7, Woodward shows the diameter of the passageway of the upper tubular portion tapers inwardly (22) so that the flow of fluid through the upper tubular portion is restricted as seen in Figure 3A.

Regarding claim 8, Woodward depicts that the diameter (along 22) of the upper passageway of the upper tubular portion is adjustable by trimming to increase the flow of fluid through the apparatus (the upper portion of 22 above stop 24 could be cut to increase the area for increased flow through the passageway).

Regarding claim 9, Woodward's upper tubular portion can be inserted into the bottom of the liquid delivery tube, (the upper portion is configured to be inserted into the inner diameter of a straw, where the exterior of the straw would go over the upper tubular tapered portion, the limitation is not positively recited).

Regarding claim 12, Woodward discloses the spacing between the inlet end and the outlet end of the valve chamber is of a sufficient length so that as the ball moves from the open position to the closed position, a portion of the liquid in the delivery tube

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is permitted to pass back through the apparatus to reduce the amount of liquid in the tube (Col. 2, Lns. 52-69).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woodward (US 4,070,237) in view of Tatum (US 342,478).

Woodward has taught all of the limitations of the claimed invention except that the valve has "the plurality of the interior ribs are longitudinally aligned".

Tatum discloses a ball valve, which teaches the plurality of the interior ribs (a) are longitudinally aligned, as shown in figure1.

In view of the Tatum patent, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the plurality of the interior ribs are longitudinally aligned in replace of the stop of Woodward in order to provide for a more stable valve seat.

5. Claims 6, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woodward (US 4,070,237).

Woodward has taught all of the features of the claimed invention except that, the valve seat sidewalls tapering inwardly at an angle less than 20.76 but greater than 14.76 degrees, or sidewalls that taper inwardly at an angle less than generally 21 degrees but greater than generally 15 degrees, or at an angle greater than 17 degrees but generally less than 18 degrees.

Woodward teaches the use of a ball check valve used with a fluid, having a "50 degree inclusive angle, i.e. 25 degrees per side, for the tapered seat 16, (Col. 5, Lns. 3-6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the range at an angle less than 20.76 but greater than 14.76 degrees, or sidewalls that taper inwardly at an angle less than generally 21 degrees but greater than generally 15 degrees, or at an angle greater than 17 degrees but generally less than 18 degrees, since such range overlaps or is close enough in range to the 25 degrees of Woodward, that selection would involve only routine skill in the art (see MPEP 2144.05).

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6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woodward (US 4,070,237) in view of Wright (US 3,773,256).

Woodward has taught all of the features of the present invention except that the liquid delivery tube is in the form of a straw having an upper end for delivering fluid to the mouth of a user and a bottom end to which the apparatus is attached.

Wright discloses a drinking device having a liquid delivery tube that is in the form of a straw having an upper end for delivering fluid to the mouth of a user and a bottom end to which the apparatus is attached as shown in figure 1.

In view of the Wright patent, it would have been obvious to one of ordinary skill in the art at the time of invention to employ the liquid delivery tube that is in the form of a straw having an upper end for delivering fluid to the mouth of a user and a bottom end to which the apparatus is attached of Wright onto the valve of Woodward, in order to provide a means to assist a child in drinking from a straw (Col. 1, Lns. 14-17).

### ***Response to Arguments***

7. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***



8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Price whose telephone number is (571) 272-2712. The examiner can normally be reached on 7AM - 5:30PM M-R.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CP



7 August 2006



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